

MATERIAL SAFETY DATA SHEET

CARBARYL 4L INSECTICIDE

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC - DAY OR NIGHT 1-800-424-9300

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

FORMULATED FOR:

LOVELAND PRODUCTS, INC.
P.O. Box 1286 • Greeley, CO 80632-1286

24-Hour Emergency Phone: 1-800-424-9300
Medical Emergencies: 1-800-301-7976
U.S. Coast Guard National Response Center: 1-800-424-8802

PRODUCT NAME: CARBARYL 4L INSECTICIDE
CHEMICAL NAME: Carbaryl: 1-naphthyl N-methylcarbamate
CHEMICAL FAMILY: Carbamate Insecticide
EPA REG. NO.: 34704-447
MSDS Number: 000447-06-LPI

MSDS Revisions: Sec. 2, 3, 5, 9, 10, 11, 15, 16 Date of Issue: 05/19/06

Supersedes: 07/06/04

2. HAZARDS IDENTIFICATION SUMMARY

KEEP OUT OF REACH OF CHILDREN – CAUTION – Harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing of spray mist. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

This product is white to beige opaque liquid with mild odor.

Immediate Effects: Eye: Causes redness, irritation, tearing. **Skin:** Harmful if absorbed through skin. May produce symptoms similar to those from ingestion. **Ingestion:** The product causes reversible cholinesterase inhibition. Repeated overexposure may cause more severe cholinesterase inhibition with more pronounced signs and symptoms. May lead to rapid onset of nausea, vomiting, diarrhea, abdominal pain, involuntary shaking, excess salivation, pinpoint pupils, blurred vision, profuse sweating, temporary paralysis, respiratory depression, and convulsions. **Inhalation:** Harmful if inhaled. May produce symptoms similar to those from ingestion. **Medical Conditions Aggravated by Exposure:** Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.

Warning Statements:

NOTE TO PHYSICIAN: This product is a carbamate (cholinesterase-inhibiting) insecticide. Overexposure to this substance may cause toxic signs and symptoms due to stimulation of the cholinergic nervous system. These effects of overexposure are spontaneously and rapidly reversible. All treatment should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Specific treatment consists of parenteral atropine sulfate. Improve tissue oxygenation as much as possible before administering atropine to minimize the risk of ventricular fibrillation. Mild case may be given 1 to 2 mg intramuscularly every 30 to 60 minutes until full atropinization has been achieved and repeated thereafter whenever symptoms reappear. Severe cases should be given 2 to 4 mg intramuscularly every 30 to 60 minutes as needed to maintain the effect for at least 12 hours. Dosages for children should be appropriately reduced. Complete recovery from overexposure is to be expected within 24 hours. Persons regularly exposed in manufacturing and handling this product should have a pre-exposure and periodic RBC (red blood cell) cholinesterase level checks.

3. COMPOSITION, INFORMATION ON INGREDIENTS

Chemical Ingredients:	Percentage by Weight:	CAS No.	TLV (Units)
Carbaryl	43.00	63-25-2	5 mg/m ³
Inert Ingredients, including Propylene Glycol	57.00	57-55-6	not listed

4. FIRST AID MEASURES

If swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

If in eyes: Hold eye open and rinse slowly and gently with water 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-800-301-7976. Have the product label or container with you when calling a poison control center or doctor, or going for treatment.

5. FIRE FIGHTING MEASURES

FLASH POINT (°F/Test Method): >212°F/>100°C (PMCC)
FLAMMABLE LIMITS (LFL & UFL): LFL: 2.6% (V); UFL: 19% (V)
EXTINGUISHING MEDIA: Dry powder, carbon dioxide (CO₂), foam, or water spray.
HAZARDOUS COMBUSTION PRODUCTS: Thermal decomposition products include, but are not limited to, oxides of nitrogen and carbon and methyl isocyanate in trace amounts.
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus with full protective clothing. Fight fire from upwind and keep all non-essential personnel out of area.
UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

For small spills, absorb with an absorbent material such as pet litter. Sweep up and transfer to containers for possible land application according to label use or for proper disposal. Check local, state and federal regulations for proper disposal. Flush the area with water to remove any residue.

CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

7. HANDLING AND STORAGE

HANDLING: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

STORAGE: Store in a safe manner. Store in original container only. Store in a cool, dry place. Keep container tightly closed when not in use. Do not contaminate water, food or feed by storage or disposal.

Personal Protective Equipment (PPE): Applicators and other handlers must wear: long sleeved shirt and long pants, waterproof gloves and shoes plus socks. Follow manufacturer's instructions for cleaning and maintaining PPE. If no instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets with requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

RESPIRATORY PROTECTION: Not normally required, if vapors or mists exceed acceptable levels, wear a NIOSH approved pesticide respirator.

EYE PROTECTION: Chemical goggles or shielded safety glasses.

SKIN PROTECTION: Wear protective clothing: long-sleeved shirts and pants, shoes with socks. Wear waterproof gloves.

	OSHA PEL 8 hr TWA	ACGIH TLV-TWA
Carbaryl	5 mg/m ³	5 mg/m ³

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: White to beige opaque liquid with mild odor.

SPECIFIC GRAVITY (Water = 1): 1.10 g/ml

BULK DENSITY: 9.18 lbs/gal.

SOLUBILITY: Miscible

VAPOR PRESSURE: 17.8 mm Hg @ 68°F/20°C

BOILING POINT: 208°F/98°C

pH: 4-6 (5% solution)

PERCENT VOLATILE (by volume): Not established

EVAPORATION RATE: Not established

Note: These physical data are typical values based on material tested but may vary from sample to sample.

Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

10. STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: Excessive heat, open flame or extreme cold.

INCOMPATIBILITY: Strong bases and acids.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition – oxides of nitrogen and carbon and trace amounts of methyl isocyanate.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD₅₀ (rat): 699 mg/kg

Acute Dermal LD₅₀ (rat): > 4000 mg/kg

Eye Irritation (rabbit): Slight irritation

Skin Irritation (rabbit): Slight irritation

Inhalation LC₅₀ (rat): 3.8 mg/L (4 hr).

Skin Sensitization (guinea pig): Not a sensitizer

Carcinogenic Potential: None listed in NTP or OSHA. ACGIH lists Carbaryl in Group A4. IARC lists Carbaryl in Group 3.

12. ECOLOGICAL INFORMATION

Carbaryl is extremely toxic to aquatic and estuarine invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Discharge from rice fields may kill aquatic and estuarine invertebrates. Do not contaminate water by cleaning equipment or disposal of wash waters.

Highly toxic to bees exposed to direct treatment or to residues on blooming crops and weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

13. DISPOSAL CONSIDERATIONS

Do not reuse empty containers. **Metal:** Triple rinse (or equivalent), then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.
Plastic: Triple rinse (or equivalent), then offer for recycling at an ACRC site (go to <http://www.acrecycle.org> for locations) or by reconditioning, or puncture and dispose of in a sanitary landfill, or, incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. Wastes resulting from the use of this product may be disposed on site or at an approved waste disposal facility. Do not contaminate water, food or feed by storage or disposal.

14. TRANSPORT INFORMATION

DOT Shipping Description: LESS THAN 25 GALLONS NOT REGULATED BY USDOT.
DOT Shipping Description: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, UN3082, III (CARBARYL) RQ ERG GUIDE 171
U.S. Surface Freight Classification: INSECTICIDES, INSECT REPELLENTS, NOI, OTHER THAN POISON (NMFC 102120, CLASS: 60)
Consult appropriate ICAO/IATA and IMDG regulations for shipment requirements in the Air and Maritime shipping modes.

15. REGULATORY INFORMATION

NFPA & HMIS Hazard Ratings:	NFPA		HMIS
	2 Health	0 Least	2 Health
	1 Flammability	1 Slight	1 Flammability
	1 Instability	2 Moderate	1 Reactivity
		3 High	H PPE
		4 Severe	

SARA Hazard Notification/Reporting
SARA Title III Hazard Category: Immediate Y Fire N Sudden Release of Pressure N
 Delayed Y Reactive N

Reportable Quantity (RQ) under U.S. CERCLA: Carbaryl (CAS: 63-25-2): 100 pounds
SARA, Title III, Section 313: Carbaryl (CAS: 63-25-2) 43.0%
RCRA Waste Code: U279
CA Proposition 65: Not listed.

16. OTHER INFORMATION

MSDS STATUS: Sections 2, 3, 5, 9, 10, 11, 15, 16 revised
PREPARED BY: Registrations and Regulatory Affairs **REVIEWED BY:** Environmental/ Regulatory Services

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